

The opinion in support of the decision being entered today was **not** written for publication and is **not** binding precedent of the Board.

Paper No. 18

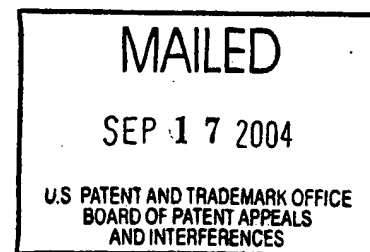
UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte CARSTEN BINGEL, HANS-HERBERT BRINTZINGER,
HANS-ROBERT-HELLMUTH DAMRAU, PATRIK MÜLLER
and JÜRGEN SUHM

Appeal No. 2004-1873
Application No. 09/701,658

ON BRIEF



Before OWENS, KRATZ, and JEFFREY T. SMITH, **Administrative Patent Judges**.
JEFFREY T. SMITH, **Administrative Patent Judge**.

DECISION ON APPEAL

Applicants appeal the decision of the Primary Examiner finally rejecting claims 9 to 14, all of the pending claims.¹ We have jurisdiction under 35 U.S.C. § 134.²

¹ According to the Examiner, Answer page 2, the amendments to the claims filed January 7, 2003 and April 11, 2003 have not been entered.

² In rendering this decision, we have considered Appellants' arguments presented in the Brief filed April 1, 2003, and the Reply Brief filed August 4, 2003.

BACKGROUND

Appellants' invention relates to bridged metallocene monohalide complexes having at least one indenyl ring attached to the bridging groups where the metallocenes have oxygen or sulfur to carbon moieties attached to the transition metal. According to Appellants, the claimed metallocenes have the advantage of being readily soluble and at the same time show catalyst activities in polymerizations at least as good as the corresponding metallocene dihalides. (Brief, p. 2). Claim 9, which is representative of the claimed invention, appears in an appendix to this decision.

The Examiner rejected claims 9 to 14 under 35 U.S.C. § 103(a) as unpatentable over either Tsutsui alone or in combination with Repo.³ (Answer pp. 4 to 6).

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CITED PRIOR ART

As evidence of unpatentability, the Examiner relies on the following references:

Tsutsui et al. (Tsutsui) .5,795,838 Aug. 18, 1998

Repo, T., et al. (Repo) Journal of Organometallic Chemistry, 1997, pp. 541, 363-366.

Rather than reiterate the conflicting viewpoints advanced by the Examiner and the Appellants concerning the above-noted rejections, we refer to the Answer and the Briefs.

Appellants have indicated that "[c]laims 11-12 do not stand or fall with claims 9-14". (Brief, page 3). We select claim 9 as representative of the rejected claims. We will treat the claims separately only to the extent that separate arguments have been presented by Appellants. See 37 CFR § 1.192(c)(7)(2003).

The Examiner asserts that Tsutsui discloses bridged metallocene monohalide complexes that have at least one indenyl ring attached to the bridging groups and the metallocene complexes have oxygen or sulfur to carbon moieties attached to the transition metal. Specifically, the Examiner asserts that Tsutsui discloses the metallocene compound can comprise an alkylaryl group of 6-10 carbon atoms in which Y represents O or S, and R³ is a C₇-C₃₀- arylalkyl or C₇-C₃₀- alkylaryl. (Answer, p. 5). The Examiner concludes that deriving a compound that corresponds to the claimed invention would have been obvious to a person of ordinary skill in the art. A person of ordinary skill in the art would have reasonably expected, based on the teaching of Tsutsui, that monohalogen hydrocarbyloxy complexes are encompassed by the compounds

described by Tsutsui. (Answer, p. 5). The Examiner further cited the Repo reference to show that persons of ordinary skill in the art would have recognized that metallocene complexes could have been formed including an alkylaryl group of 6-10 carbon atoms. (Answer, p. 6).

Appellants, Brief pages 3-4, reiterates the Examiner's position presented in the final rejection and Advisory action. Appellants conclude "[t]he examiner should be reversed because any possible *prima facie* case of obviousness has been rebutted by the evidence of record." (Brief, p. 4).

Appellants assert that the Examiner's obviousness determination does not account for the compound's greater solubility. (Brief, p. 4). Appellants argument is not persuasive because a person of ordinary skill in the art would have reasonably expected that the compounds that correspond to the formula disclosed in Tsutsui would function for their intended purpose as an olefin polymerization catalyst. The motivation to form the compounds of the claimed invention does not have to be the same as Appellants.

Appellants rely on the examples in the specification as evidence of unexpected results. Specifically, Appellants assert that the record

establishes the claimed compounds exhibit the combination of greater solubility than their dihalide analogs and at least comparable activity.

(Brief, p. 5).

Having reviewed the data present, we agree with the Examiner, Answer page 9, that the showing in the specification is not commensurate in scope with the degree of protection sought by the claimed subject matter. See *In re Grasselli*, 713 F.2d 731, 743, 218 USPQ 769, 778 (Fed. Cir. 1983); *In re Tiffin*, 448 F.2d 791, 792, 171 USPQ 294, 294 (CCPA 1971). It is well settled that "[O]bjective evidence of nonobviousness must be commensurate in scope with the claims." (quoting *In re Lindner*, 457 F.2d 506, 508, 173 USPQ 356, 358 (CCPA 1972); *In re Dill*, 604 F.2d 1356, 1361, 202 USPQ 805, 808 (CCPA 1979) ("The evidence presented to rebut a *prima facie* case of obviousness must be commensurate in scope with the claims to which it pertains.")). In the present case, the claimed subject matter encompasses a wide variety of metallocene compounds. However, as argued by the Examiner, Answer page 9, "the data illustrate polymerization using bisindenyl monochloride aryloxy metallocenes only, but it says nothing regarding the polymerization activity of, for instance, akenyl

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complexes and alkylalkenyl complexes, much less their fluorinated derivatives."

Appellants must also explain why the showing is commensurate in scope with the claimed subject matter. See *In re Boesch*, 617 F.2d 272, 276, 205 USPQ 215, 219 (CCPA 1980). Appellants have not directed us to evidence that establishes why the relative few examples presented in the specification would have been representative of the scope of the claimed invention. The argument of Appellants' representative appearing in the Reply Brief cannot take the place of evidence lacking in the record. *Estee Lauder Inc. v. L'Oreal, S.A.*, 129 F.3d 588, 595, 44 USPQ2d 1609, 1615 (Fed. Cir. 1997). This evidence is especially relevant in this appeal where Tsutsui discloses metallocene compounds that encompass the claimed compounds.

Appellants have not explained why the results achieved in the specification would have been unexpected by one of ordinary skill in the art, see *In re Freeman*, 474 F.2d 1318, 1324, 177 USPQ 139, 143 (CCPA 1973); *In re Klosak*, 455 F.2d 1077, 1080, 173 USPQ 14, 16 (CCPA 1972). This is especially significant in this case where the Repo reference indicates that the solubility and activity of the catalyst are related properties. (Repo, p. 365).

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Based on our consideration of the totality of the record before us, having evaluated the *prima facie* case of obviousness in view of Appellants' arguments and evidence, we conclude that the subject matter of claim 1 would have been obvious to a person of ordinary skill in the art from the combined teachings of the cited prior art. See *In re Oetiker*, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992).

CONCLUSION

The rejections of claims 9 to 14 under 35 U.S.C. § 103(a) as unpatentable over either Tsutsui alone and in combination with Repo are affirmed.

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Time for taking action

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a).

AFFIRMED

Terry J. Owens
TERRY J. OWENS
Administrative Patent Judge


PETER F. KRATZ
Administrative Patent Judge


JEFFREY T. SMITH
Administrative Patent Judge

**BOARD OF PATENT
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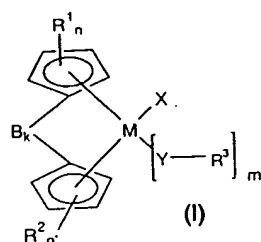
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KEIL & WEINKAUF
1350 CONNECTICUT AVENUE, N.W.
WASHINGTON, DC 20036

APPENDIX

9. A compound of the formula (I),



where

- M is a metal of transition group III, IV, V or VI of the Periodic Table of the Elements,
- R^1 are identical or different and are each a radical $Si(R^{12})_3$, where R^{12} are identical or different and are each a hydrogen atom or a C_1 - C_{40} group or R^1 is a C_1 - C_{30} -group, or two or more radicals R_1 may be connected to one another in such a way that the radicals R_1 and the atoms of the cyclopentadienyl ring which connect them form a C_4 - C_{24} -ring system which may in turn be substituted,
- R^2 are identical or different and are each a radical $Si(R^{12})_3$, where R^{12} are identical or different and are each a hydrogen atom or a C_1 - C_{40} -group, or R^2 is a C_1 - C_{30} -group, or two or more radicals R^2 may be connected to one another in such a way that the radicals R^2 and the atoms of the cyclopentadienyl ring which connect them form a C_4 - C_{24} -ring system which may in turn be substituted,

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- R^3 are identical or different and are each a C_2 - C_{25} -alkenyl, C_3 - C_{15} -alkylalkenyl, C_5 - C_{24} -heteroaryl, C_7 - C_{30} -arylalkyl, C_7 - C_{30} -alkylaryl, fluorinated C_1 - C_{25} -alkyl, fluorinated C_6 - C_{24} -aryl, fluorinated C_7 - C_{30} -arylalkyl or fluorinated C_7 - C_{30} -alkylaryl,
- X is a halogen atom,
- Y is oxygen or sulfur,
- n is from 0 to 4,
- n' is from 0 to 4,
- m is from 1 to 3,
- k is 1,
- B is a bridging structural element between the two cyclopentadienyl rings and one or both cyclopentadienyl rings are substituted in such a way that they form an indenyl ring.